

CLAIMS

1. An apparatus for compressing media content in an electronic device having a video capture device for capturing the video content, comprising:

5 a real-time, Low Complexity (LC) video compressor (110) for compressing the video content into an LC encoded bit stream in real-time; and
a non-real-time High Complexity (HC) video compressor (130) for generating an HC encoded bit stream from the LC encoded bit stream in non-real-time.

10 2. The apparatus of claim 1, further comprising a memory device (120) for storing the LC encoded bit stream therein.

15 3. The apparatus of claim 1, wherein said non-real-time HC video compressor (130) begins generating the HC encoded bit stream while the video capture device is still capturing the video content and the real-time LC video compressor is still compressing the video content.

20 4. The apparatus of claim 1, wherein the electronic device is a mobile type of device, being one of a cellular telephone, a Personal Digital Assistant (PDA), a digital camera, and a camcorder.

25 5. The apparatus of claim 1, wherein the electronic device is a Personal Video Recorder (PVR), and said real-time LC video compressor (110) compresses the video content into the LC encoded bit stream in real-time so as to meet any real-time requirements of the video content, while said non-real-time HC video

compressor generates the HC encoded bit stream from the LC encoded bit stream in non-real-time so as to reduce storage requirements of the underlying video content.

6. The apparatus of claim 1, wherein said non-real-time HC video compressor (130) is capable of reusing at least a portion of the LC encoded bit stream so as to avoid having to again encode the at least a portion of the LC encoded bit stream to generate the HC encoded bit stream.

7. The apparatus of claim 1, wherein said real-time LC video compressor (110) compresses the video content into Intra (I) frame types of Motion Picture Experts Group 4-part 10.

8. The apparatus of claim 7, wherein said non-real-time HC video compressor (130) generates the HC encoded bit stream as I, forward Predictive (P), and Bi-predictive (B) frame types of the Motion Picture Experts Group 4-part 10.

9. The apparatus of claim 8, wherein said non-real-time HC video compressor (130) is capable of reusing the I frame types of the LC encoded bit stream so as to avoid having to again encode the I frame types of the LC encoded bit stream to generate the HC encoded bit stream.

10. The apparatus of claim 1, wherein said non-real-time HC video compressor (130) generates the HC encoded bit stream from the LC encoded bit stream so as to minimize bandwidth consumption in a transmission of the HC

encoded bit stream from the electronic device in comparison to a transmission of the LC encoded bit stream.

11. The apparatus of claim 1, wherein said real-time, LC video compressor
5 compresses the video content into the LC encoded bit stream so as to increase
an amount of the video content that can be immediately stored subsequent to
capture.

12. The apparatus of claim 1, wherein said electronic device is further
10 capable of capturing audio content, and said apparatus further comprises:

a real-time LC audio compressor (408) for compressing the audio content into
another LC encoded bit stream that corresponds to the audio content; and
a non-real-time HC audio compressor (408) for generating another HC
encoded bit stream from the other LC encoded bit stream corresponding to the audio
15 content.

13. The apparatus of claim 12, wherein said real-time LC audio compressor
compresses (408) the audio content using Moving Picture Experts Group Layer-3
Audio (MP3), and said non-real-time audio compressor generates the other HC
20 encoded bit stream from the other LC encoded bit stream using MP3-Pro.

14. A method for compressing media content in an electronic device having
a video capture device for capturing the video content, comprising the steps of:
compressing (220), in real-time, the video content into an Low Complexity
25 (LC) encoded bit stream; and

generating (240), in non-real-time, an HC encoded bit stream from the LC encoded bit stream.

15. The method of claim 14, wherein said generating step (240) begins generating the HC encoded bit stream while the video capture device is still capturing the video content and the video content is still being compressed into the LC encoded bit stream.

10 16. The method of claim 14, wherein the electronic device is a mobile type of device, being one of a cellular telephone, a Personal Digital Assistant (PDA), a digital camera, and a camcorder.

15 17. The method of claim 14, wherein the electronic device is a Personal Video Recorder (PVR), and said compressing step (220) compresses the video content into the LC encoded bit stream in real-time so as to meet any real-time requirements of the video content while said generating step generates the HC encoded bit stream from the LC encoded bit stream in non-real-time so as to reduce storage requirements of the underlying video content.

20 18. The method of claim 14, wherein said generating step (240) is capable of reusing at least a portion of the LC encoded bit stream so as to avoid having to again encode the at least a portion of the LC encoded bit stream to generate the HC encoded bit stream.

19. The method of claim 14, wherein said compressing step (220) compresses the video content into Intra (I) frame types of Motion Picture Experts Group 4-part 10.

5 20. The method of claim 19, wherein said generating step (240) generates the HC encoded bit stream as I, forward Predictive (P), and Bi-predictive (B) frame types of the Motion Picture Experts Group 4-part 10.

10 21. The method of claim 20, wherein said generating step (240) is capable of reusing the I frame types of the LC encoded bit stream so as to avoid having to again encode the I frame types of the LC encoded bit stream to generate the HC encoded bit stream.

15 22. The method of claim 14, wherein said generating step (240) generates the HC encoded bit stream from the LC encoded bit stream so as to minimize bandwidth consumption in a transmission of the HC encoded bit stream from the electronic device in comparison to a transmission of the LC encoded bit stream.

20 23. The method of claim 14, wherein said compressing step (220) compresses the video content into the LC encoded bit stream so as to increase an amount of the video content that can be immediately stored subsequent to capture.

24. The method of claim 14, wherein said electronic device is further capable of capturing audio content, and said method further comprises the steps of:

compressing (220) the audio content into another LC encoded bit stream that corresponds to the audio content; and
generating (240) another HC encoded bit stream from the other LC encoded bit stream corresponding to the audio content.

5

25. The method of claim 24, wherein said step of compressing (220) the audio content compresses the audio content using Moving Picture Experts Group Layer-3 Audio (MP3), and said step of generating another HC encoded bit stream generates the HC encoded bit stream from the LC encoded bit stream using MP3-Pro.

10